13 Drivebelt check, adjustment and replacement (every 7500 miles or 6 months)

Refer to illustrations 13.1, 13.3a, 13.3b, 13.4, 13.5 and 13.6

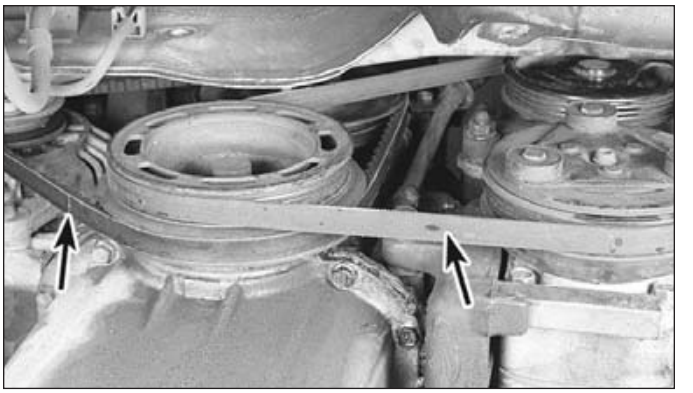
Check

1 The alternator/water pump and power steering pump/air conditioning compressor drivebelts, are located at the front of the engine **(see illustration)**. Because of their composition and the high stresses to which they are subjected, drivebelts stretch and deteriorate as they get older. They must therefore be periodically inspected. The good condition and proper adjustment of the alternator/water pump drivebelt is especially critical because it effects the operation of the engine.

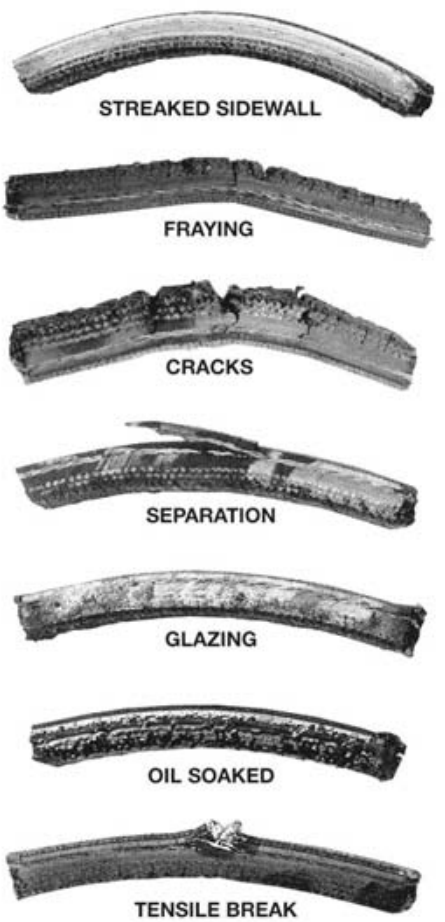
2 Vehicles equipped with power steering and air conditioning have a second drivebelt dedicated to these accessories. This accessory drivebelt is mounted outboard of the alternator/water pump drivebelt on the crankshaft pulley.

3 With the engine off, open the hood and locate the drivebelts. With a flashlight visually check the belts. Look for cracking, fraying, separation, tears and glazing, which gives the belt a shiny appearance **(see illustrations)**. Both sides of the belt should be inspected, which means you will have to twist the belt to check the underside. Use your fingers to feel the belt where you can't see it. If any of the above conditions are evident, replace the belt (go to Step 8).

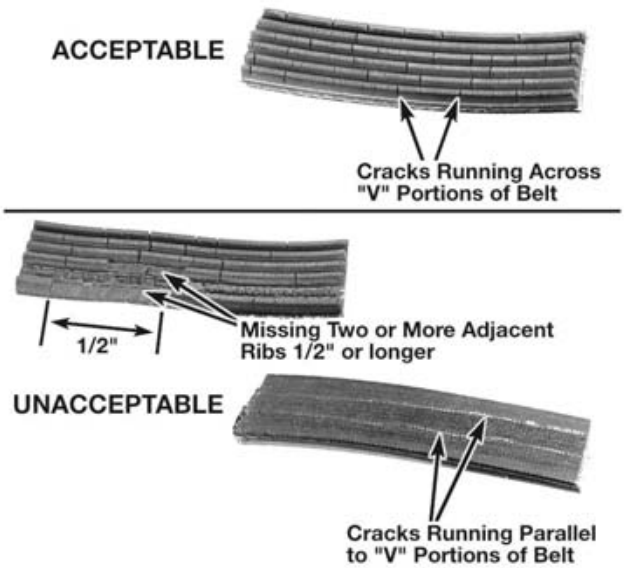
4 To check the tension of each belt in accordance with factory specifications, apply moderate pressure (22 pounds) midway between the specified pulleys. Measure the deflection **(see illustration)** and compare your measurement to the specified drivebelt deflection for either a used or new belt. **Note:** *A "used" belt is defined as any belt which has been operated more than five minutes on the engine; a "new" belt is one that has been used for less than five minutes.*



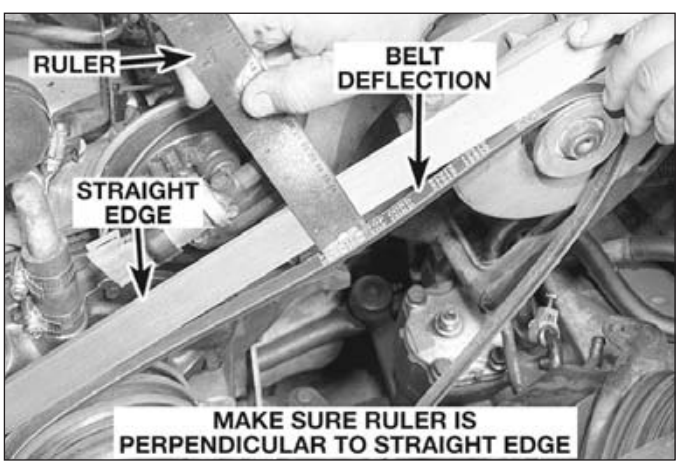
13.1 Drivebelts (arrows) stretch and deteriorate as they age and must be carefully inspected



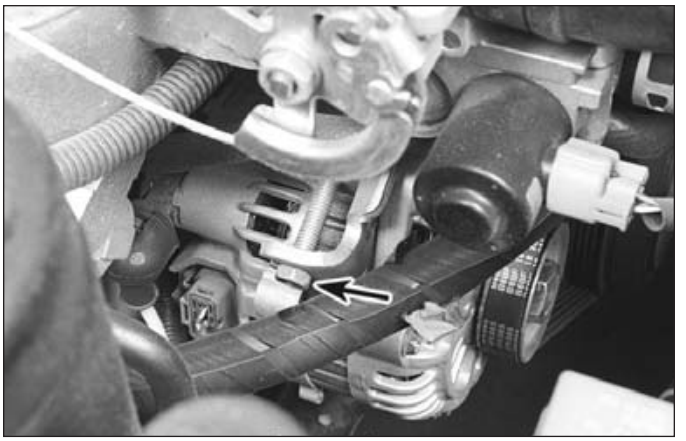
13.3a Here are some of the more common problems associated with drivebelts (check belts very carefully to prevent an untimely breakdown)



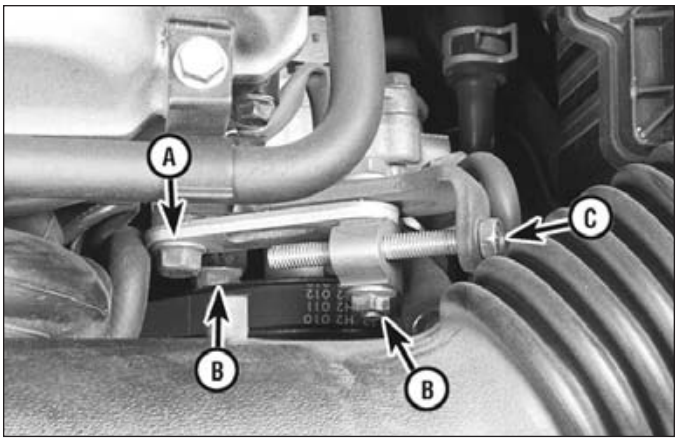
13.3b Small cracks in the underside of a V-ribbed belt are acceptable - lengthwise cracks, or missing pieces that cause the belt to make noise, are cause for replacement



13.4 Measuring drivebelt deflection with a straightedge and ruler



13.5 After loosening the alternator mounting bolts, tighten the adjusting bolt (arrow) to tension the drivebelt



13.6 After loosening the bolt (A) and two locknuts (B) that secure the pump, turn the adjusting bolt (C) to tension the drivebelt (vehicles with air conditioning that do not have power steering have an adjustable idler pulley to tension the drivebelt)

Adjustment

5 If the alternator/water pump belt must be adjusted, loosen the alternator mounting bolts located above and under the alternator. Tighten the adjusting bolt to push the alternator away from the engine and tighten the belt **(see illustration)**. Tighten the mounting bolts. Measure the belt deflection in accordance with the above method. Repeat this step until the drivebelt is properly adjusted.

6 Adjust the power steering pump belt by loosening the bolt and two locknuts that secure the pump to the engine. Adjust the belt tension by turning the adjusting bolt **(see illustration)**. Tighten the adjusting locknut and the pump bolt and nut. Measure the belt deflection in accordance with the above method. Repeat this step until the drivebelt is properly adjusted.

7 Vehicles that do not have power steering but are equipped with air conditioning have an idler pulley installed above the compressor. Loosen the idler pulley locknut and turn the adjusting bolt to tension the drivebelt. Tighten the locknut. Measure the belt deflection in accordance with the above method. Repeat this step until the drivebelt is properly adjusted.

Replacement

8 To replace a belt, follow the above procedures to loosen the drivebelt enough to slip the belt off the crankshaft pulley and remove it. If you are replacing the alternator/water pump belt, you will have to remove the power steering and/or air conditioning belt first because of the way they are arranged on the crankshaft pulley. Because of this and because belts tend to wear out more or less together, it is a good idea to replace both belts at the same time. Mark each belt and its appropriate pulley groove so the replacement belts can be installed in their proper positions.

9 Take the old belts to the parts store in order to make a direct comparison for length, width and design.

10 After replacing the drivebelt, make sure that it fits properly. When installing a multi-ribbed belt, make sure that it is centered - it must not overlap either edge of the pulley.

11 Adjust the drivebelt(s) in accordance with the procedure outlined above.

14 Underhood hose check and replacement (every 7500 miles or 6 months)

Caution: *Replacement of air conditioning hoses must be left to a dealer service department or air conditioning shop that has the equipment to depressurize the system safely. Never remove air conditioning components or hoses until the system has been depressurized.*

General

1 High temperatures in the engine compartment can cause the deterioration of the rubber and plastic hoses used for engine, accessory and emission systems operation. Periodic inspection should be made for cracks, loose clamps, material hardening and leaks.

2 Information specific to the cooling system hoses can be found in Section 15.

3 Some, but not all, hoses are secured to the fittings with clamps. Where clamps are used, check to be sure they haven't lost their tension, allowing the hose to leak. If clamps aren't used, make sure the hose has not expanded and/or hardened where it slips over the fitting, allowing it to leak.

Vacuum hoses

4 It's quite common for vacuum hoses, especially those in the emissions system, to be color coded or identified by colored stripes molded into them. Various systems require hoses with different wall thickness, collapse resistance and temperature resistance. When replacing hoses, be sure the new ones are made of the same material.

5 Often the only effective way to check a hose is to remove it completely from the vehicle. If more than one hose is removed, be sure to label the hoses and fittings to ensure correct installation.

6 When checking vacuum hoses, be sure to include any plastic T-fittings in the check. Inspect the fittings for cracks and the hose where it fits over the fitting for distortion, which could cause leakage.

7 A small piece of vacuum hose (1/4-inch inside diameter) can be used as a stethoscope to detect vacuum leaks. Hold one end of the hose to your ear and probe around vacuum hoses and fittings, listening for the "hissing" sound characteristic of a vacuum leak. **Warning:** *When probing with the vacuum hose stethoscope, be very careful not to come into contact with moving engine components such as the drivebelts, cooling fan, etc.*

Fuel hose

Warning: *There are certain precautions which must be taken when inspecting or servicing fuel system components. Work in a well ventilated area and do not allow open flames (cigarettes, appliance pilot lights, etc.) or bare light bulbs near the work area. Mop up any spills immediately and do not store fuel soaked rags where they could ignite.*

8 Check all rubber fuel lines for deterioration and chafing. Check especially for cracks in areas where the hose bends and just before fittings, such as where a hose attaches to the fuel filter.

9 High quality fuel line, specifically designed for fuel injection systems, must be used for fuel line replacement. **Warning:** *Never use anything other than the proper fuel line for fuel line replacement.*

10 Spring-type clamps are commonly used on fuel lines. These clamps often lose their tension over a period of time, and can be "sprung" during removal. Replace all spring-type clamps with screw clamps whenever a hose is replaced.